

IN THE CLAIMS:

Please cancel Claims 14, 16, 20 to 26, 28 to 40, 43, 44 and 46 without prejudice or disclaimer of subject matter. Please amend the remaining claims as follows:

1. (Currently Amended) A method for transforming ~~managing color data to transform~~ source color image data from a source device into destination color image data for rendering by a destination device, wherein said method uses a color management module which has a source color transform generator for generating a source color transform, said method comprising the steps of:

obtaining the source color image data, wherein the source color image data is in a source color space corresponding to the source device;

obtaining a source color data file corresponding to the source device, wherein the source color data file contains source device color characteristic data, and wherein the source device color characteristic data contains colorimetric data and corresponding device signal data;

constructing a source color transform based on the source device color characteristic data contained in the source color data file, wherein said source color transform is constructed by using the source color transform generator, and wherein the source color transform transforms the source color image data to interim color image data in an interim color space; and

applying the constructed source color transform and a destination color transform to the source color image data to transform the source color image data from the

source device color space into ~~interim~~ the destination color image data in ~~an interim color~~ space.

2. (Cancelled)

3. (Currently Amended) A method for ~~managing~~ transforming color data according to claim 1, wherein the source color data file further contains viewing condition data corresponding to a set of viewing conditions in which the source device color characteristic data was measured.

4. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 3, wherein the viewing condition data includes ambient colorimetric specification data.

5. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 3, wherein the viewing condition data includes surround colorimetric specification data.

6. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 3, wherein the viewing condition data includes background colorimetric specification data.

7. (Currently Amended) A method for ~~managing~~transforming color data according to Claim 3, wherein the viewing condition data includes adapting field colorimetric specification data.

8. (Currently Amended) A method for ~~managing~~transforming color data according to Claim 1, wherein the device signal data represents a set of input command signal values for the source device.

9. (Currently Amended) A method for ~~managing~~transforming color data according to Claim 1, wherein the colorimetric data represents a set of measured color values corresponding to a rendered color image.

10. (Currently Amended) A method for ~~managing~~transforming color data according to Claim 1, wherein the device signal data represents a set of output command signal values from the source device.

11. (Currently Amended) A method for ~~managing~~transforming color data according to Claim 1, wherein the colorimetric data represents a set of measured color values corresponding to a color image rendered by the source device.

12. (Currently Amended) A method for ~~managing~~transforming color data according to Claim 1, wherein the source device is a printer, wherein the device signal data

represents a set of input command signal values for the printer, and wherein the colorimetric data represents a set of measured color values corresponding to a color image rendered by the printer.

13. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, wherein the source device is a scanner, wherein the colorimetric data represents a set of measured color values corresponding to a rendered color image, and wherein the device signal data represents a set of output signal values from the scanner.

14. (Cancelled)

15. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, further comprising the step of incorporating the constructed source color transform and the destination color transform in a color transformation sequence, and wherein said step of applying applies the transformation sequence to the source color image data.

16. (Cancelled)

17. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, Claim 14, ~~wherein the step of transforming the interim color image data into destination color image data includes accessing a destination color data file which~~

~~contains destination device color characteristic data, and further comprising the step of constructing a~~ the destination color transform based on a destination color data file, wherein the destination device color characteristic data, the destination color transform for ~~transforming a set of~~ transforms color data from the interim color space to ~~the~~ a destination device color space.

18. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, ~~Claim 14~~, ~~wherein the step of transforming the interim color image data into destination color image data includes accessing and utilizing~~ wherein the destination color transform is contained in a destination device color profile ~~containing a destination color transform, the destination color transform for transforming a set of color data from the interim color space to the destination device color space.~~

19. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, wherein the interim color space is a device-independent color space.

20. to 26. (Cancelled)

27. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, wherein the construction of the source color transform utilizes a color appearance model.

28. to 40. (Cancelled)

41. (Currently Amended) A method for ~~managing~~ transforming color data according to ~~Claim 9~~ Claim 1, wherein the colorimetric data is in a standard color space.

42. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 41, wherein the standard color space is an XYZ color space.

43. and 44. (Cancelled)

45. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, wherein the construction of the source color transform is based on a type of the interim color space and a color appearance model.

46. (Cancelled)

47. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, wherein the source color transform is stored in a memory.

48. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, wherein the source color transform is stored in a device color profile.

49. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 1, wherein a source gamut boundary description is generated from the source color data file.

50. (Currently Amended) A method for ~~managing~~ transforming color data according to Claim 49, wherein the source gamut boundary description is used in conjunction with a destination gamut boundary description and a gamut mapping algorithm to create a gamut transformation.

51. (Currently Amended) A method for transforming ~~managing~~ color data ~~to transform~~ source color image data from a source device into destination color image data for rendering by a destination device, wherein said method uses a color management module which has a source color transform generator for generating a source color transform, said method comprising the steps of:

obtaining the source color image data, wherein the source color image data is in a source color space corresponding to the source device;

obtaining a source color data file corresponding to the source device, wherein the source color data file contains source device color characteristic data, and wherein the source device color characteristic data is formatted according to a standard predetermined format and has a plurality of tags containing the source device color characteristic data and a set of viewing condition data corresponding to a set of viewing conditions in which the source device color characteristic data was measured;

constructing a source color transform based on the source device color characteristic data and the set of viewing condition data by utilizing an interim color space and a color appearance model, wherein said source color transform is constructed by using the source color transform generator and a color appearance model, and wherein the source color transform for transforming transforms the source color image data from the source device color space into an interim color image data in the interim color space;

incorporating the source color transform in a color transformation sequence;
and

applying the color transformation sequence to the source color image data to transform the source color image data ~~from the source device color space into a the~~ destination ~~device color space~~ image data.

52. to 87. (Cancelled)

88. (Currently Amended) An apparatus for managing color data to transform source color image data from a source device into destination color image data for rendering by a destination device, comprising: a program memory for storing process steps executable to perform a method according to any of Claims ~~1 or 3 to 51~~, 1, 3 to 13, 15, 17 to 19, 27, 41, 42, 45, or 47 to 51, and a processor for executing the process steps stored in said program memory.

89. (Currently Amended) Computer-executable process steps stored on a computer readable medium, said computer-executable process steps for managing color data to transform source color image data from a source device into destination color image data for rendering by a destination device, said computer-executable process steps comprising process steps executable to perform a method according to any of Claims ~~1 or 3 to 51~~ 1, 3 to 13, 15, 17 to 19, 27, 41, 42, 45, or 47 to 51.

90. (Currently Amended) A computer-readable medium which stores computer-executable process steps, the computer-executable process steps to transform source color image data from a source device into destination color image data for rendering by a destination device, said computer-executable process steps comprising process steps executable to perform a method according to any of Claims ~~1 or 3 to 51~~ 1, 3 to 13, 15, 17 to 19, 27, 41, 42, 45, or 47 to 51.

91. and 92. (Canceled)

93. (Currently Amended) A method for managing color data to transform source color image data from a source device into destination color image data for rendering by a destination device, wherein said method uses a color management module which has a color transform generator, said method comprising the steps of:

accessing a source color data file of the source device and a destination color data file of the destination device, the source and the destination color data file containing colorimetric data and corresponding device signal data;

constructing a source color transform based on the source color data file by using the color transform generator; and

constructing a destination color transform based on the destination color data file by using the color transform generator;

generating a source gamut boundary description of the source device based on ~~from the colorimetric data included in~~ the source color data file, and a destination gamut boundary description of the destination device based on ~~from the colorimetric data included in~~ the destination color data file;

constructing a gamut transform based on the gamut boundary of the source device and the destination device gamut boundary description; and

applying the source color transform, the gamut transform and the destination color transform to the color image data.

94. (Previously Presented) A computer-readable medium which stores computer-executable process steps, the computer-executable process steps to transform source color image data from a source device into destination color image data for rendering by a destination device, said computer-executable process steps comprising process steps executable to perform a method according to Claim 93.

Please add Claims 95 to 97, as follows:

95. (New) An apparatus for transforming source color image data from a source device into destination color image data for rendering by a destination device, said apparatus comprising:

a color management module which has a source color transform generator for generating a source color transform;

a first obtaining unit constructed to obtain the source color image data, wherein the source color image data is in a source color space corresponding to the source device;

a second obtaining unit constructed to obtain a source color data file corresponding to the source device, wherein the source color data file contains source device color characteristic data, and wherein the source device color characteristic data contains colorimetric data and corresponding device signal data;

a constructing unit constructed to construct a source color transform based on the source device color characteristic data contained in the source color data file, wherein said source color transform is constructed by using the source color transform generator, and wherein the source color transform transforms the source color image data to interim color image data in an interim color space; and

an applying unit constructed to apply the source color transform and a destination color transform to the source color image data to transform the source color image data from the source device color space into the destination color image data.

96. (New) An apparatus for transforming source color image data from a source device into destination color image data for rendering by a destination device, said apparatus comprising:

a color management module which has a source color transform generator for generating a source color transform;

a first obtaining unit constructed to obtain the source color image data, wherein the source color image data is in a source color space corresponding to the source device;

a second obtaining unit constructed to obtain a source color data file corresponding to the source device, wherein the source color data file contains source device color characteristic data, and wherein the source device color characteristic data is formatted according to a standard predetermined format and has a plurality of tags containing the source device color characteristic data and a set of viewing condition data corresponding to a set of viewing conditions in which the source device color characteristic data was measured;

a constructing unit constructed to construct a source color transform based on the source device color characteristic data and the set of viewing condition data by utilizing an interim color space and a color appearance model, wherein said source color transform is constructed by using the source color transform generator and a color appearance model, and wherein the source color transform transforms the source color image data from the source device color space into the interim color image data in the interim color space;

incorporating the source color transform in a color transformation sequence;
and

applying the color transformation sequence to the source color image data to transform the source color image data into the destination color image data.

97. (New) An apparatus for managing color data to transform source color image data from a source device into destination color image data for rendering by a destination device, said apparatus comprising:

a color management module which has a color transform generator;

an accessing unit constructed to access a source color data file of the source device and a destination color data file of the destination device, the source and the destination color data file containing colorimetric data and corresponding device signal data;

a first constructing unit constructed to construct a source color transform based on the source color data file by using the color transform generator; and

a second constructing unit constructed to construct a destination color transform based on the destination color data file by using the color transform generator;

a generating unit constructed to generate a source gamut boundary description of the source device based on the source color data file, and a destination gamut boundary description of the destination device based on the destination color data file;

a third constructing unit constructed to construct a gamut transform based on the gamut boundary of the source device and the destination device gamut boundary description; and

an applying unit constructed to apply the source color transform, the gamut transform and the destination color transform to the color image data.